भारतीय मानक
Indian Standard

IS 13597 : 2023

वस्त्रादि — टोपियों के लिए पोलीप्रोपाइलीन से बने गुंथित फीते — विशिष्टि

(पहला पुनरीक्षण)

Textiles — Polypropylene Braided Tapes for Berets — Specification

(First Revision)

ICS 59.060.20; 59.080.50

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Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee had been approved by the Textile Division Council.

Braiding generally produces tubular or narrow fabrics by intertwining three or more strands of yarns, threads or filaments. This standard covers braided tapes manufactured from polypropylene filaments used for berets.

This standard was first published in 1992. This standard has been revised again to incorporate the following major changes:

a) BIS certification marking clause has been modified;
b) Restriction for the usage of sulphur dyes on dope-dyed polypropylene yarn has been removed;
c) References to Indian Standard given in Annex A has been updated; and
d) Sampling and criteria for conformity has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — POLYPROPYLENE BRAIDED TAPES FOR BERETS — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the constructional particulars and performance requirements of polypropylene braided tapes used in the manufacture of berets.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

3 MANUFACTURE

3.1 Yarn

The tape shall be manufactured from polypropylene yarn of nominal count 50 tex (or 450 D).

3.2 Tape

The tape shall be manufactured on 35 spindle braiding machines with two ends working as one. It shall be flat braided under even tension with uniform and firm selvedges.

3.2.1 It shall be free from all braiding defects.

3.3 Dyeing

If dyed tapes are required, dope-dyed polypropylene yarn shall be used in manufacturing of tapes.

4 REQUIREMENTS

4.1 Physical

The tape shall conform to the physical requirements as specified in Table 1.

4.2 The tape shall also conform to the requirements as given in Table 2.

Table 1 Physical Requirements of Polypropylene Tapes for Berets

(*Clause* 4.1)

Sl No.	Length m	Width mm	Mass, g/100m *Min*	Number of Threads, Full width *Min*	Breaking Load, N *Min*
(1)	(2)	(3)	(4)	(5)	(6)
i)	100 ± 1.5	10 ± 2	200 ± 10	35 (each 2 fold)	205
Method of Test	IS 1954		IS 1964	Visual	IS 1969 (Part 1)

Table 2 Chemical Requirements of Polypropylene Tape for Berets

(*Clause* 4.2)

Sl No. (1)	Characteristics (2)	Requirements (3)	Method of Test (4)
i)	Colour fastness to		
	a) Light	4 or better	IS/ISO 105-B02
	b) Washing		IS/ISO 105-C10
	i) Change in colour	4 or better	
	ii) Staining on adjacent fabric	4 or better	
	c) Organic solvents		IS/ISO 105-X05
	i) Change in colour	4 or better	
	ii) Staining on adjacent fabric	4 or better	
	d) Perspiration	4 or better	IS/ISO 105-E04
ii)	*p*H value	5.5 to 8.5	IS 1390

4.3 Sealed Sample

4.3.1 If in order to illustrate or specify properties of the tape not covered in the standard, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respect.

4.3.2 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

5 MARKING

5.1 Each roll of tape shall be suitably marked with the following information:

a) Indication of the source of manufacture;
b) Year of manufacture;
c) Length of roll(m); and
d) Any other information/instruction provided by the manufacturer/required under law.

5.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

6 PACKING

The tape shall be packed as per the agreements between the buyer and seller.

7 SAMPLING AND CRITERIA FOR CONFORMITY

7.1 Unless otherwise agreed to between the buyer and the seller, the number of rolls to be selected at random from a lot shall be as given in Table 3.

Table 3 Sampling

(*Clause* 7.1 *and* 7.2)

Sl No.	**Number of Rolls in Lot**	**Sample Size**	**Permissible Number of Defective Rolls**	**Number of Tests/Characteristics**
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	3	0	3
ii)	51 to 150	5	0	3
iii)	151 to 300	8	1	4
iv)	301 to 500	13	1	5
v)	501 and Above	20	2	7

NOTES

1 In the case of length, the value obtained for the length of each roll shall be compared with its specified, declared or marked length. The mean percentage of deficiency in length, if any, shall be determined and made applicable to the lot.

2 In respect of mass and breaking strength 'Mean + 0.4' range shall not outpass specified values.

3 In respect of colour fastness, no failure shall be permissible.

7.2 Criteria for Conformity

Characteristic	*Number of Specimens*	*Criteria for Conformity*
Length, width threads in full width	As per co1 (3) of Table 3	Number of defective rolls not to exceed the number given under co1 (4) of Table 3
Mass, breaking load, colour fastness and *p*H value	Take test specimen randomly [as given in col (5) of Table 3] from sample rolls [as in co1 (3) of Table 3] for testing the various requirements	None of the test specimens shall fail in any of the requirements

ANNEX A

(*Clause* 2)

LIST OF REFERRED STANDARDS

IS No.	*Title*
IS 1390 : 2022/ ISO 3071 : 2020	Textiles — Determination of *p*H of aqueous extract (*third revision*)
IS 1954 : 1990	Determination of length and width of woven fabrics — Methods (*second revision*)
IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per unit area of fabrics (*second revision*)
IS 1969 (Part 1) : 2018/ISO 13934-1 : 2013	Textiles — Tensile properties of fabrics: Part 1 Determination of maximum force and elongation at maximum force using the strip method
IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness: Part B02 Colour fastness to artificial light: Xenon arc fading lamp test
IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda
IS/ISO 105-E04 : 2013	Textiles — Tests for colour fastness: Part E04 Colour fastness to perspiration
IS/ISO 105-X05 : 1994	Textiles — Tests for colour fastness: Part X05 Colour fastness to organic solvents

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

Organization	*Representative(s)*
Additional Controller CQA (General Stores), DGQA, Ministry of Defence	Shri A. Chowdhury **(*Chairperson*)**
Apparel Export Promotion Council New Delhi	Shri Praveen Kukreja
DKTE's Society Textile & Engineering Institute, Ichalkaranji	Dr S. B. Vhanbatte Shri Rajanna Gotipamul (*Alternate*)
Defence Materials & Stores Research & Development Establishment, Kanpur	Shri A. K. Yadav Ms Priyanka Katiyar (*Alternate*)
Federation of Indian Chambers of Commerce and Industry	Shri Anu Handa
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Indian Institute of Technology, Delhi	Prof Amit Rawal Prof Bipin Kumar (*Alternate*)
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JCT Limited, Phagwara	Shri Kushwinder Singh Shri Arwinder Singh (*Alternate*)
M K U Limited, Kanpur	Shri Sumit Khandelwal Shri Rajib Pal (*Alternate*)
Motilal Dulichand Pvt Ltd, Kanpur	Shri Shailendra Nath Misra Shri Sudhir Shivhare (*Alternate*)
National Textile Corporation, New Delhi	Shri R. K. Yadav
Office of the Textile Commissioner, Mumbai	Shri V. K. Kohli Shri Humayun K. (*Alternate*)
Ordnance Parachute Factory, Kanpur	Shri V. M. Bagade Shri S. Kondaiah (*Alternate*)
Planet Analysis Pvt Ltd, Kanpur	Shri Prashanta Biswas
S L Banthia Textiles Industries Pvt Ltd	Shri Santosh Kumar Banthia
SGS Limited, Gurugram	Ms Anitha Jeyaraj Shri Gaurav Saraswat (*Alternate*)
Shipra International, Kanpur	Shri Abhishek Kumar Agrawal

Organization	*Representative(s)*
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Testtex India Laboratories Pvt Ltd, Mumbai	Shrimati Meeta Shigala Shri Chandrakant (*Alternate*)
Textiles Committee, New Delhi	Shri R. Chandran Shri Ganesh P. Bangar (*Alternate*)
Thanawala and Co, Mumbai	Shri Hemal Thanawala Shri Vivan Thanawala (*Alternate*)
The Bombay Textile Research, Association, Mumbai	Shri Shaikh Riyaz Ahmed Dr Prasanta Kumar Panda (*Alternate*)
U P Textile Technological Institute, Kanpur	Dr Prashant Vishnoi
Universal Yarn and Tex Pvt Ltd, Kanpur	Shri Rajiv K. Bhartiya
BIS Directorate General	Shri J. K. Gupta Scientist 'E'/Director and Head (Textiles) [Representing Director General (*Ex-officio*)]

Member Secretary
Shri Tanishq Awasthi
Scientist 'B'/Assistant Director
(Textiles), BIS

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Amendments Issued Since Publication

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